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AIRCRAFT ENGINE EMISSIONS

Paper presented by the International Civil Aviation Organization (ICAO)

Summary

The International Civil Aviation Organization (ICAO) is the specialized agency of the United Nations which deals with aviation matters.

In the environmental field, ICAO has developed international specifications dealing with the control of aircraft noise by certification of aircraft. Circulars have also been published on "Noise Assessment for Land-Use Planning" and "Guidance Material on SST Aircraft Operations". In addition, ICAO has activively supported the World Meteorological Organization (WMO) and the World Health Organization (WHO) in environmental programmes of mutual interest.

Studies of possible atmospheric pollution by aircraft were initiated by ICAO in 1973. And while it was concluded that aircraft engine emissions do not presently pose a serious pollution problem except at a few airports, it was decided that work should be pursued on control of aircraft engine emissions through an engine certification scheme. This decision was reached because the proportion of total emissions at airports which is produced by aircraft is likely to increase as the control of ground vehicles becomes more effective. Work has therefore been continuing on a scheme of controlling smoke, gaseous emissions and vented fuel as well as on the development of specifications for instrumentation and measurement procedures. Control of emissions at airports by operational procedures is also being investigated.

Work to date has been directed toward emissions at low altitudes but the existence of a potential probem at high altitudes has also been recognized. Should investigations confirm that aircraft might be a significant contributor to pollution of the upper atmosphere, ICAO would wish to move to alleviate the problem as soon as possible. Early identification of such problems will provide designers with time to minimize or avoid such probems and reduce the disruptive and costly effects of retroactive regulations.

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